

## PATENT COOPERATION TREATY

10/501309

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

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JUN 29 2004

TO BE REVIEWED  
 BY ATTORNEY

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing (day/month/year)	24.06.2004
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Applicant's or agent's file reference AD6800PCT1	IMPORTANT NOTIFICATION	
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International application No. PCT/US 03/07026	International filing date (day/month/year) 07.03.2003	Priority date (day/month/year) 07.03.2002
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Applicant E.I. DU PONT DE NEMOURS AND COMPANY
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1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

**4. REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/I/B/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

**EEL NOTED**

07 Sept 2004

Name and mailing address of the international preliminary examining authority:	Authorized Officer
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**PATENT COOPERATION TREATY**  
**PCT**  
**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**  
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference AD6800PCT1	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US 03/07026	International filing date (day/month/year) 07.03.2003	Priority date (day/month/year) 07.03.2002
International Patent Classification (IPC) or both national classification and IPC C08F210/02		
Applicant E.I. DU PONT DE NEMOURS AND COMPANY		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 0 sheets.</p>
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <li>I <input checked="" type="checkbox"/> Basis of the opinion</li> <li>II <input type="checkbox"/> Priority</li> <li>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li>IV <input type="checkbox"/> Lack of unity of invention</li> <li>V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li>VI <input type="checkbox"/> Certain documents cited</li> <li>VII <input type="checkbox"/> Certain defects in the international application</li> <li>VIII <input type="checkbox"/> Certain observations on the international application</li> </ul>

Date of submission of the demand 29.09.2003	Date of completion of this report 24.06.2004
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Schmidt, H Telephone No. +31 70 340-2461



INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

International application No.

PCT/US 03/07026

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-4, 6, 8, 11-19 as originally filed  
5, 7, 9, 10 received on 08.03.2004 with letter of 08.03.2004

Claims, Numbers

1-6 received on 08.03.2004 with letter of 08.03.2004

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:
- the drawings, sheets:

5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/US 03/07026**

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes: Claims	1-6
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-6
Industrial applicability (IA)	Yes: Claims	1-6
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**Box I**

1. The following documents are referred to in the present opinion; the numbering will be adhered to the entire procedure

D1 US-A-4778866  
D2 US-A-5582918  
D3 WO-A-01/14620  
D4 EP-A-398250  
D5 WO-A-02/072648

**Box V**

2. The subject matter of present claims 1-6 appears to be novel acc. Art. 33(2) PCT

2.1 D1 discloses copolymers of ethylene and fluorinated acrylate derivatives, which are applied for films. However, monomers with group L (aromatic or polar groups) are not disclosed

D2 discloses ethylene copolymers for anti-friction coating films. However, the linking group is aliphatic

D3 discloses flash spinning of fibers of ethylene-fluorinated ethylene copolymers but no acrylic monomers similar to the ones disclosed in the present application

D4 discloses membranes made of copolymers of ethylene with fluorinated phosphorous acid comonomers, but no fluorinated monomer as claimed in the present claims

3. Present claims 1-6 do not appear to involve an inventive step acc. Art. 33(3) PCT

3.1 Subject matter of the present claims are articles, films, fibers etc. with reduced surface tension of polymers of fluorinated monomers comprising an aromatic or polar linking group

Closest prior art is D2

D2 describes articles using polymers of ethylene and a fluorinated acrylic group for lowering the surface tension (column 2, line 66 - 3, line 12)

Distinguishing feature to D2 is the linking group: aliphatic, not aromatic or polar like in the present case

This distinguishing feature does not result in a technical effect. The present application does not provide evidence for advantages of a polar or aromatic as compared to an aliphatic group

The problem to be solved is to provide articles of a lowered surface tension using a polymer with alternative fluorinated monomers

The solution to the problem are articles using polymers with monomers with aromatic and polar linking groups

The monomers used in the polymers of claim 1 are not known from one of D1-D4. However, it seems to be obvious that aromatic linking groups can be used in place of aliphatic linking groups to obtain the same effect of lowered surface tension. Since the applicant has not provided experiments with articles using these aromatic linking groups there is no evidence for a technical effect. Without evidence of a technical effect, the mere replacement of an aliphatic by an aromatic group cannot be regarded as inventive since the polymers are obviously suitable for the same purpose

3.2 The application of the claimed polymers in other articles like membranes, fibers etc. is obvious, since D1 and D3-D4 show that similar polymers are suitable for these uses.

#### **Box VI**

D5, which was published on 19.9.2002, discloses a similar copolymer of fluorinated monomers and ethylene or third monomer, and its application in films (claim 1, see line 23, page 11), composite films (claim 3, page 10, line 4) and fibers (claim 2, 5 and 6 page 10, line 16)

#### **Box VIII**

4.1 "about" in combination with ranges renders the subject matter of claims 1-6 unclear  
ted and adapted acc. claim 1